



June 29, 2016

## NAWCWD engineers' impact earns Etter Awards

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Jeremy Abshire, center, an aerospace engineer at Naval Air Warfare Center Weapons Division China Lake, receives the 2015 Dr. Delores M. Etter Top Scientist and Engineers of the Year Award in the Engineering Excellence category from Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RDA) Sean Stackley, and former ASN RDA Dr. Delores M. Etter, for whom the award is named, on June 22 during a ceremony at the Pentagon. (U.S. Navy photo)

NAVAL AIR WARFARE CENTER WEAPONS DIVISION CHINA LAKE, Calif. - NAWCWD research mechanical engineer Dr. Jonathan Essel and aerospace engineer Jeremy Abshire were recognized June 22 at a ceremony at the Pentagon for earning 2015 Dr. Delores M. Etter Top Scientists and Engineers of the Year Awards in the Scientific Excellence and Engineering Excellence categories, respectively.

The Dr. Delores M. Etter Top Scientists and Engineers of the Year Award, named after the former assistant secretary of the Navy for Research, Development and Acquisition, was established in 2006 to recognize Navy and Marine Corps civilian and military personnel for exceptional science and engineering achievements and contributions in their fields and to the fleet.

Essel made breakthroughs in developing innovative methods of harvesting explosive nanoparticles for improving the performance and safety of explosives and propellants. Among Dr. Essel's accomplishments was the creation of energetic inks and precursor



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materials to be used for additive manufacturing—or 3-D printing—of energetics and energetic devices. Additionally, he initiated the development of a unique nanomaterial laboratory specifically designed for Navy energetic materials.

"It's really an honor to receive this award," Essel said. "Nanoenergetics is something that I studied in grad school, so the work I do here is a continuation of that. It's really exciting because we have a lot of tools now that didn't exist 20 years ago and that gives us great control of the final product."

Essel's work in gathering nanoparticle energetic material has contributed to increased effectiveness and performance of energetic materials in blast and propulsion, providing safer munitions for the warfighter.

"Dr. Essel's dedication, innovative attitude, and professional demeanor exemplify the Navy's standards of excellence and professionalism," his nomination read. "Even with the many projects he directs, he continues to stay active in hands-on technology development."

Abshire supports multiple development and production programs as a solid rocket propulsion subject matter expert. Through his work on the Integrated High Payoff Rocket Propulsion Technology Program (IHRPT) and the Counter Air Future Naval Capability (CA FNC), Abshire and his team developed, matured, and demonstrated several advanced propulsion technologies that offer significant performance improvements to current and future tactical air-launched rocket propulsion systems.

"I was pleased to learn of my nomination for this award and honored to receive it," Abshire said. "I knew the work we were doing in IHRPT and CA FNC was important to the future of tactical rocket propulsion, but I didn't think it would be recognized at this level."

Since the conclusion of the CA FNC, Abshire continues to be actively engaged with industry partners to further mature HLG propulsion while protecting the Navy's intellectual property rights to the technology through patent defense activities with the NAWCWD Office of Counsel.

"I'm also especially proud of and grateful for the multi-disciplined team, made up of individuals from both NAWCWD and industry, that supported me throughout the CA FNC," Abshire said. "Without them, none of these accomplishments would have been possible."



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Dr. Jonathan Essel, center, research mechanical engineer at Naval Air Warfare Center Weapons Division China Lake, receives the 2015 Dr. Delores M. Etter Top Scientists and Engineers of the Year Award for the category of Scientific Excellence from Assistant Secretary of the Navy for Research, Development and Acquisition (ASN RDA) Sean Stackley, and former ASN RDA Dr. Delores M. Etter on June 22 during a ceremony at the Pentagon. (U.S. Navy photo)